REMARKS

In view of both the amendments presented above and the following discussion, the Applicants submit that none of the claims now pending in the application is anticipated under the provisions of 35 USC § 102 or obvious under the provisions of 35 USC § 103. Thus, the Applicants believe that all of these claims are now in allowable form.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, the Examiner should telephone Mr. Peter L. Michaelson, Esq. at (732) 530-6671 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Status of claims

Claims 14, 16, 17, 20-22 and 24-26 have been amended to more precisely define the invention than previously.

No claims have canceled. No new claims have been added.

Rejections under 35 USC § 102

The Examiner has rejected claims 14-17 and 26 under the provisions of 35 USC § 102(e) as being anticipated by the teachings of the Wallenius patent (United States patent 6,760,417 issued to J. Wallenius on July 6, 2004). This rejection is respectfully traversed.

Given the similarities between independent claims 14 and 26, then, to simplify the following discussion, the Applicants will address this rejection principally in the context of claim 14.

Specifically, the Examiner takes the opinion that the Wallenius patent identically discloses all the elements in claim 14, by stating: "Wallenius teaches a service accounting system (i.e., mediator unit 14 as shown in figure 1) comprising at least one service account associated with a user (i.e., account where the mediator unit 14 receives and places a predetermined amount of the money from a prepayment account of billing unit, col. 6, lines 10-15), the service account having a classification (i.e., different context events 21 to 25, col. 5, lines 3-16), the service accounting system being connected to a main accounting system (i.e., billing unit 15, col. 7, lines 54-60) comprising a main account associated with the user (i.e., the prepay account), a predetermined part of the main account being transferable to the service account, and said part of the main account being predetermined through use of the classification (col. 6, lines 10-26 and col. 6, line 66 through col. 7, line 3)."

As the Examiner will soon appreciate, this view is not correct.

The Wallenius patent is directed to a scheme for charging for prepaid telecommunications services on a real-time basis. This scheme finds particular use in a GPRS (General Packet Radio Service) packet network.

Conventionally speaking, a GPRS network contains GPRS support nodes (also known as "packet data service nodes") that are each connected to a GSM mobile network so as to provide packet data service to mobile terminals through several base stations, i.e., cells. The GSM network provides access to other networks, such as a public switched network. See, e.g., col. 1, line 13 et seq of this patent. Within the GPRS network, user charges are made through a series of charging records (CDR) which are generated at the support nodes and then transmitted to a charging gateway functionality (CGF). The gateway then effectively filters the charging data and transmits filtered charging records to a billing system which, in turn, generates actual charging data. As indicated in col. 1, line 37 et seq, this conventional approach has a serious problem: generating the charging data has tended to be a rather slow process. Real-time charging has proven necessary to avoid situations where a subscriber could continue to use a prepaid service even though the amount of money, which that subscriber had prepaid for that service, had already been exhausted. Approaches aimed at solving this problem include sending filtered charging data directly from the charging gateway functionality to a billing unit, or data concerning GPRS context events could be sent from the support nodes to the billing unit with charging then being based on context events. Unfortunately, these conventional approaches are also problematic: the data involved is complex and presumably a large amount of data could result, and also, of heightened concern, network-specific charging methods, for the same service, may differ from one support node to the next thus causing incompatibilities. As a result of such incompatibilities, different events taking place during a

call -- particularly if that call transits from a local network through a foreign network(s) -- can disadvantageously produce different impacts on charging, depending on the network operator, or no impact at all, thereby leading to erroneous charges. Such events include changes in: quality of service (QoS) provided, transmission rate, and/or location; temporary entry into a shadow region, temporary cutting off of a subscriber connection and changes during an ongoing call in the service then being used by the subscriber.

The invention disclosed in the '417 Wallenius patent attempts to overcome the incompatibilities and facilitate real-time call charging by, as indicated in col. 2, line 33 et seq, converting event or charging data received from the support nodes into a real-time, unambiguous (universal) data format that is understandable to the subscribers' billing unit, i.e., use of a universal data format. Thus, each billing unit needs to know the one universal format. This patent defines, in col. 2, line 23 et seq, that unambiguity means that "charging data are structurally identical in the different telecommunications networks, irrespective of the internal charging algorithms of the networks." Through use of a universal data format, a service can apparently and advantageously be charged on a real-time basis.

To implement this inventive approach, the '417 Wallenius patent, in col. 5, line 3 et seq, relies on placing a mediator 14 (M-SCF) between two support nodes 11 and 12. Information, from the support nodes about different context events 21-25 related to the service then being used

by a subscriber, are provided by these nodes to the mediator. As discussed in col. 4, line 51 et seq, the context events apparently define different aspects of the service, such as mobility management (MM) context event 21 which is created when a subscriber registers in the GPRS network, containing information relating to mobility and security of the subscriber. Packet data protocol (PDP) events 22 and 23 are created by Serving GPRS support node (SGSN) 11 for routing purposes, with the PDP context determining different data transmission parameters, such as PDP type (e.g., X.25 or IP), PDP address, QoS and others. As indicated in col. 4, line 64 et seq, PDP contexts 24 and 25 provide address and routing information of GPRS subscribers. The routing information is used for tunneling protocol data.

The mediator converts, in real-time, the information received from the MM and PDP context events 21-25, by applying charging algorithms of the network, into unambiguous charging data, expressed as, e.g., an amount of money or charging pulses.

Now, what happens with this charging data? For prepaid services and as discussed in col. 5, line 66 et seq, billing unit 15 has a prepayment account for a subscriber into which that subscriber can make a prepayment for any or those services. Based on the information it receives from the mediator, the billing unit simply debits the prepayment account with the amount of a prepaid service which has been consumed by the subscriber. If, as indicated in col. 6, line 4 et seq, the amount of money in the prepayment account for the subscriber has been exhausted, then the billing unit

so informs the packet network which, in turn, prevents the subscriber from using any more of the prepaid services, such as by deactivating contexts 21-25 in support nodes 11 and 12 and associated with that subscriber.

Alternatively, as noted in col. 6, line 10 et seq, the mediator may request the billing unit to place a predetermined amount of money into the prepayment account and from which the mediator can then subtract an amount corresponding to the amount of a prepaid service which the subscriber has then consumed. Should the subscriber deactivate the service with a positive balance left for that service, then the billing unit can simply transfer that balance back into the prepayment account.

Note that while there are multiple charging functions in the network, i.e., by each support node, all the charges are only made from <u>ONE</u> prepaid account.

This unitary account approach is discussed by the Applicants on page 1, line 25 et seq of the present specification wherein the Applicants note that the prior art teaches that if multiple services are being provided, then the charges for all those services are debited from a single common (unitary) prepaid account.

What concerns the present Applicants is not the need for permitting real-time service charging through use of a universal format -- to which the '417 Wallenius patent addresses, but rather, as stated on page 2, line 12 et seq of the present specification, the need to segregate services into different service accounts so that each subscriber can

exercise sufficient control over what (s)he has paid for each individual service and take a specific action when the balance in an account for that particular service reaches a predetermined limit.

This problem is vastly different than that to which the '417 Wallenius patent is directed -- and one to which this patent is totally oblivious.

The Applicants advantageously solve their problem by differentiating the call accounting by accounting for different communication services through use of different corresponding accounts. Such control is completely missing from the approach taught by the '417 Wallenius patent simply because charges for different services are not segregated and accounted separately but rather just debited from a common (unitary) account.

In contrast to a conventional "unitary" approach, the present inventive approach relies on connecting a service accounting system to a main accounting system. The latter stores separate "service" accounts which can be differentiated from each other by corresponding classifications, with each service carrying a different classification. The main accounting system stores so-called "main" accounts, each of which can be either a pre-paid or post-paid account. By virtue of connecting the main and service accounting systems together, a telecommunications user can not only examine his(her) main account but also transfer an amount in that account to any of his(her) specific service accounts to cover an expected or actual shortfall. In that regard, the user can make a single

payment through that person's corresponding main account for all the services to which that person then subscribes, e.g., standard telephony, data transport, internet access, cellular, access to paid content, etc, and then transfer a portion of that payment to the service account for any or all of those subscribed services. Whenever the balance in any of those service accounts reaches a minimum value, the service accounting system can send a "recharge" request to the main accounting system in response to which a predefined amount of money can then be automatically transferred from the user's main account into that particular service account. Alternatively, the user can not only examine any of his service accounts to learn his(her) current usage and corresponding charges, but also can manually recharge that account, to the extent necessary, from his(her) main account. Further, if an individual service or main account for a given subscriber contains an insufficient balance, a service provider can take appropriate action to disallow some services, based on their classification, for that subscriber while allowing that subscriber to continue using other services. See, page 3, line 27 et seq of the present application. Consequently, through the present invention, a user can readily obtain the amount of pre-paid funds which that person then has on account for each one of the different services to which (s)he then subscribes and can also separately control how that amount is to be replenished apart from the amount and its replenishment associated with any of the other subscribed services.

In contrast to the present specification, the '417 Wallenius patent simply fails to teach, whether expressly or even implicitly, the concept of using separate service

accounts as a mechanism to permit telecommunications subscribers to differentiate amongst their different subscribed services, let alone by inclusion of a classification in each such account. Further, this patent also does not disclose, whether expressly or by implication, the concept of connecting a service accounting system, which maintains and manages such service accounts, to a main accounting system through which a subscriber can access both his(her) own main and individual service accounts and transfer funds there between as necessary.

Furthermore and in direct contrast to the Examiner's view, event contexts 21-25, as specifically taught by the '417 Wallenius patent, which define specific aspects of a common service, are not "classifications" as the Applicants define that term. In that regard, the Applicants' classifications are specifically used to differentiate among different services, but not -- as event contexts do -- among different technical aspects of a single service.

Claim 14, as it now stands, contains suitable recitations directed at the distinguishing aspects of the present invention. In that regard, this claim recites as follows, with those recitations shown in a bolded typeface:

> "A service accounting system **comprising a plurality of service accounts associated with a user, each of the service accounts having a classification associated with a corresponding service,** the service accounting system being connected to a main accounting system **comprising a main account associated with the user, a predetermined part of the main account being transferable to any one of the service accounts, and**

> **said part of the main account being predetermined through use of the classification associated with said one service account.**" [emphasis added]

Consequently, the Applicants submit that since the recitations in claim 14 are not disclosed, let alone identically, by the teachings in the '417 Wallenius patent, then this claim is not anticipated by the teachings of this patent. Consequently, this claim is patentable under the provisions of 35 USC § 102(e).

Very similar limitations to those in claim 14, though couched in process steps, appear in independent method claim 26. Accordingly, the Applicants submit that claim 26 is also not anticipated by and is patentable over the teachings in the '417 Wallenius patent for the same reasons set forth above regarding claim 14.

Moreover, each of dependent claims 15-17 depends, either directly or indirectly, from claim 14 and recites further distinguishing features of the present invention. Consequently, each of these dependent claims is patentable under 35 USC § 102 for the same exact reasons set forth above with respect to claim 14.

<u>Rejections under 35 USC § 103</u>

A. Claim 18

The Examiner has rejected claim 18 under the provisions of 35 USC § 103 as being obvious over the teachings of the Wallenius patent taken in view of the Hidem et al patent (United States patent 5,749,052 issued to S.E.

Hidem et al on May 5, 1998). This rejection is also respectfully traversed.

The Examiner takes the position that it would have been obvious to combine the teachings of the Hidem et al patent with those in the Wallenius patent and thus arrive at the present invention as recited in claim 18. This view is simply incorrect.

In particular, the '052 Hidem et al patent teaches a controller, for use in a pre-paid cellular telephone, which contains memory for storing call rate information. As indicated in col. 1, line 66 et seq and col. 7, line 46 et seq, the controller determines an amount of currency to charge for each call based on the duration and rate for that call. The Examiner is quite correct in noting that this patent teaches, in col. 13, line 46 et seq, the concept of automatically updating the telephone with additional credit, i.e., recharging it, at predefined points in time, such as daily, weekly, monthly and so forth.

However, these teachings in the '052 Hidem et al patent have no bearing whatsoever on charging for services in any manner other than through a unitary account -- as taught by the '417 Wallenius patent. All that would result from such a combination would be that the unitary account taught by the '417 Wallenius patent would simply be replenished with additional funds on an automatic periodic basis. A cellular telephone system that employs such a resulting combination would clearly be no closer to remedying the deficiency inherent in the '417 Wallenius patent -- a deficiency which the present Applicants solve --

than the teachings of that particular patent itself. Consequently, those combined teachings would stop well short of the present invention, just as do the teachings in the '417 Wallenius patent.

Furthermore, since the '417 Wallenius patent contains no disclosure whatsoever, whether express or implied, concerning use of separate service accounts with corresponding classifications as a mechanism to permit telecommunications subscribers to differentiate amongst their different subscribed services and only teaches use of a "unitary" account, then any one skilled in the art, when faced with the teachings of this patent -- whether taken in combination with those in the '052 Hidem et al patent or not, would just not be led to the present invention.

Hence, it has remained for the Applicants and only the Applicants to solve the deficiency inherent in service accounting methodologies that were based on use of a unitary account.

Consequently, the Applicants submit that claim 14 is not rendered obvious over the teachings in the '417 Wallenius patent, either taken singly or, as proposed by the Examiner, in combination with those in the '052 Hidem et al patent. The distinguishing recitations in claim 14 are shown in the preceding section of this amendment.

Claim 18 indirectly depends from claim 14 and recites further distinguishing features of the present invention as recited in claim 14. Thus, the Applicants submit that claim 18 is not rendered obvious over the

applied references for the same reason set forth above with respect to claim 14.

Hence, the Applicants submit that claim 18 is patentable under 35 USC § 103.

B. Claims 19-25

The Examiner has rejected claims 19-25 under the provisions of 35 USC § 103 as being obvious over the teachings of the Wallenius patent taken in view of the Masuda patent application (United States patent application 2003/0078031 published on April 24, 2003). This rejection is respectfully traversed as well.

The Examiner states that the Masuda application teaches all the features recited in claim 19 except that a recharging request is transmitted by an end user request, and also teaches all the features recited in each of claims 20-25. Hence, the Examiner takes the position that it would have been obvious to combine the teachings of the that application with those in the Wallenius patent and thus arrive at the present invention as recited in each of these claims. This view is also simply incorrect.

In particular, the Masuda application is directed to a communication system that provides pre-paid communication services. This application, broadly speaking, and as noted on, e.g., page 1, paragraph 14; page 2, paragraphs 37-40; and page 7, paragraph 126, teaches the concept of calculating an amount, from a pre-payment, that is to be allocated to each service, either based on a

service request from a user or on receipt of registration information from that user, such that various services can be simultaneously provided to that user in accordance with the allocation. This patent application also teaches various specific concepts relating to which services are to be provided or not if the balance is not adequate to cover all the requested services.

The Masuda application, just like the '417 Wallenius patent, relies on using a unitary account to hold a pre-payment balance. There are no separate service accounts in the system taught by the Masuda application into which the user can transfer desired prepayments for each corresponding service and/or examine an amount then available in each such account for the corresponding service.

All that would result from combining these teachings with those in the '417 Wallenius patent would be that a balance then existing in the unitary account taught by the '417 Wallenius patent would, upon user request or user registration, be allocated amongst the individual services which the user then wanted to simultaneously use. The resulting approach simply does not allow the user to monitor and control his(her) use of each individual service, including when to replenish a prepaid balance for that service. Hence, the deficiency inherent in the '417 Wallenius patent would still remain in the combined teachings -- a deficiency which the present Applicants solve. Consequently, those combined teachings would stop well short of the present invention, just as do the teachings in the '417 Wallenius patent.

Furthermore, since the '417 Wallenius patent contains no disclosure whatsoever, whether express or implied, concerning use of separate service accounts with corresponding classifications as a mechanism to permit telecommunications subscribers to differentiate amongst their different subscribed services and only teaches use of a "unitary" account, then any one skilled in the art, when faced with the teachings of this patent -- whether taken in combination with those in the Masuda application or not, would just not be led to the present invention.

Consequently, the present invention, as recited in claim 14, is not rendered obvious and hence is patentable over the teachings in the applied art for the same reasons it is patentable, as discussed above, over the '417 Wallenius patent.

Moreover, each of dependent claims 19-25 depends, either directly or indirectly, from claim 14 and recites further distinguishing features of the present invention. Consequently, each of these dependent claims is patentable under 35 USC § 103 for the same exact reasons given above with respect to claim 14.

<u>Conclusion</u>

Thus, the Applicants submit that none of the claims, presently in the application, is anticipated under the provisions of 35 USC § 102 or obvious under the provisions of 35 USC § 103.

Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

Respectfully submitted,

March 13, 2006

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